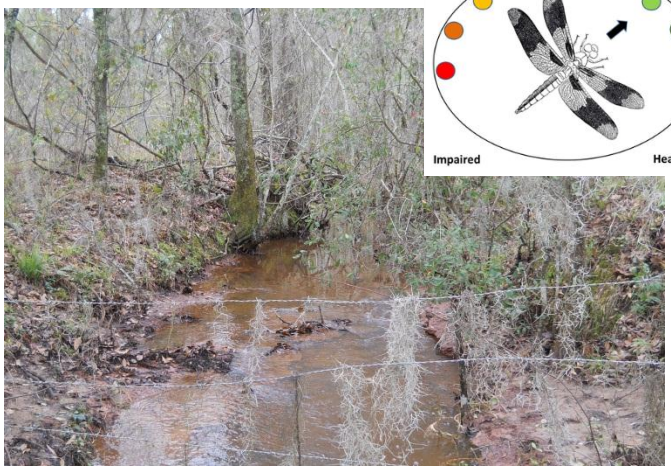
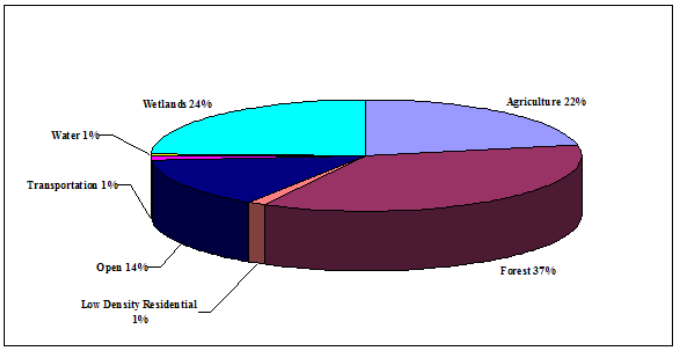
Waterbody: Dry Creek



Basin: Lake Miccosukee

Dry Creek is located in northeastern Leon County and flows into Lake Miccosukee.

As shown in the following pie chart, agricultural, residential, and transportation land uses account for approximately 24% of the 2,580 acre watershed. Increases in stormwater runoff, and waterbody nutrient loads can often be attributed to these types of land uses.



Background

Healthy, well-balanced stream communities may be maintained with some level of human activity, but excessive human disturbance may result in waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. State water quality standards are designed to protect designated uses of the waters of the state (*e.g.,* recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

Methods

Surface water sampling was conducted to determine the health of Dry Creek and met the collection and analysis requirements of the Florida Department of Environmental Protection (FDEP).

Results

Nutrients

According to FDEP requirements, Numeric Nutrient Criteria (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. Due to low water conditions, four temporally independent samples per year have never been collected from this station. Even though staff was not able to collect the required amount of samples, some conclusions can be made. Based on the average of two samples taken in 2013, total phosphorus (0.081 mg/L), and total nitrogen levels (0.46 mg/L) were low when compared to other streams in Florida.

Turbidity

The orange clay sediment that is often on the bottom of Dry Creek is the result of excessive sediment runoff from Old Magnolia Road. Sediment can coat the bottom of a streambed, filling pools, and covering natural habitat of species that live in and utilize the creek for resources. Suspended sediment can also reduce visibility, as shown by the elevated turbidity levels in July 2013 (15.1 NTU). While these levels do not exceed Class III water quality standards (average is 9.5 NTU), it is probable that the sediment is causing clarity issues in Dry Creek. Sediment runoff is not evident further upstream.

Fecal Coliforms

The Class III criterion identifies a violation when 10 percent of the samples meet or exceed 400 Most Probable Number (MPN). Consequently, fecal coliform levels in the March 2013 sample (490/100 mL) and the July 2013 sample (460/100 mL) exceeded the Class III criterion. -

Other Parameters

Other water quality parameters appear to be normal for the area and no other impairments were noted.

Conclusions

Total phosphorus and total nitrogen levels were low when compared to other streams in Florida. Elevated turbidity levels in July 2013 did not exceed Class III water quality standards, but excessive sediment is causing clarity issues in Dry Creek. Fecal coliform levels in 2013 were elevated and exceeded the Class III criterion on two occasions. Other water quality parameters appear to be normal for the area and no other impairments were noted.

Thank you for your interest in maintaining the quality of Leon County's water resources. Please feel free to contact us if you have any questions.

Contact and resources for more information

www.LeonCountyFL.gov/WaterResources

Click here to access the results for all water quality stations sampled in 2013.

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